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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/737,770
Filing Date: December 18, 2000
Appellant(s): SONG, IN-DUK

Eric J. Nuss
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 18 June 2007 appealing from the Office action mailed 28 August 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,362,858	Jeon	3-2002
6,300,995	Wakagi	10-2001

6,356,330	Ando	3-2002
6,323,918	Yoshioka	11-2001
6,278,502	Colgan	8-2001
6,219,125	Ishikura	4-2001
6,049,365	Nakashima	4-2000

Son et al, US PGPUB 2002/0008824 A1, 1-2002

Applicant's Admited Prior Art (APA), instant Specification, pp. 1-8

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 2, 4, 5, 7, 10, 12, 17, 18, 21-22, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (APA) in view of Jeon et al (Jeon) USPAT 6,362,858 B1, Wakagi et al (Wakagi) USPAT 6,300,995 B1, and further in view of Ando et al (Ando) USPAT 6,356,330 B1.

As to claims 2, 4, 5, 7, 10, 12, and 21-22, APA discloses in Figure 8 an in-plane switching liquid crystal display (LCD) device comprising: common electrodes, 54a, alternating and parallel with pixel electrodes, 66a, and a gate line, 50, for a TFT and a common line, 54, wherein common electrodes are arranged to directly contact the common line; and a first connecting line, 66, parallel to the gate line, wherein the plurality of pixel electrodes are perpendicular to the first connecting line, first ends of the pixel electrodes are connected to the first connecting line and second ends of the pixel electrodes are connected to a second connecting line, 68.

APA discloses in Figures 7A and 7B (more clear illustration than Figure 8 in these regards, Figure 8 is objected to above) that the scan line, 2 (gate line), is conventionally formed on the substrate, 1A, and that the reference signal line, 4 (common line), and the reference electrode, 14 (common electrode), are also formed on the same substrate (Applicant's wherein the common electrode is formed on the substrate like the gate line) and a are covered by a first insulating film, 11 (gate-insulating layer).

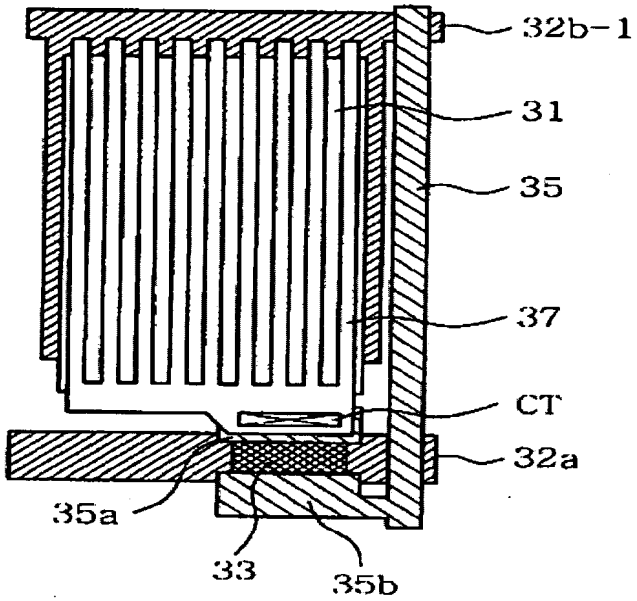
APA does not explicitly disclose 1) transparent pixel and common electrodes and an auxiliary common line.

APA does not explicitly disclose 2) a storage capacitor over the common line, wherein the storage capacitor contacts the second connecting line via a contact hole.

Jeon teaches 1) in Figures 2A-2E, an in-plane switching LCD device comprising: a gate line, 32a, on a first substrate; a data line, 35, on the first substrate, the data line being perpendicular (as illustrated) to the gate line; a common line, 32b-1, on the first

substrate, the common line being parallel (as illustrated) with the gate line and being formed of a metal (Applicant's first material, Cr for both gate line and common line; col. 2, lines 49-58, especially lines 55-58) (Applicant's wherein the common electrode is formed on the substrate like the gate line); a pixel electrode, 37, (ITO; col. 3, lines 18-22) and the common electrode, 31, (ITO; col. 2, lines 64-67) being formed of a transparent conductive material (ITO, Applicant's second material different from the first material); and a liquid crystal layer between the first and second substrates (inherent to comprising a LCD device) made by a method that simplifies the process by reducing the mask number.

FIG.2E



Jeon is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to modify the LCD design to permit manufacture by the method of Jeon to simplify the process by reducing the mask number.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA with the specific layered structure of Jeon to permit manufacture by the simplified process of Jeon to reducing the mask number.

Jeon is not applied to teach electrode shape in plan view, however, should Applicant argue that Jeon teaches away from comb electrodes, Wakagi is applied:

Wakagi teaches common electrodes having finger portions arranged in parallel to provide adequate lateral spacing between common electrodes and pixel electrodes to improve aperture ratio [col. 5, lines 31-44] for better display performance.

Wakagi is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add common electrodes having finger portions arranged in parallel to provide adequate lateral spacing between common electrodes and pixel electrodes to improve aperture ratio for better display performance.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Jeon with the common electrodes having finger portions arranged in parallel to provide adequate lateral spacing between common electrodes and pixel electrodes to improve aperture ratio for better display performance.

Ando teaches 2) [col. 6, line 29 through col. 8, line 46] a storage capacitor, 105 (Applicants storage electrode), over the common line, 101, and between the pixel electrode and the first substrate, wherein the storage capacitor contacts the second connecting line, 106, via a contact hole per Figures 1 and 2 in order to comprise his invention for an in-plane switched LCD with improved aperture ratio [abstract].

FIG. 1

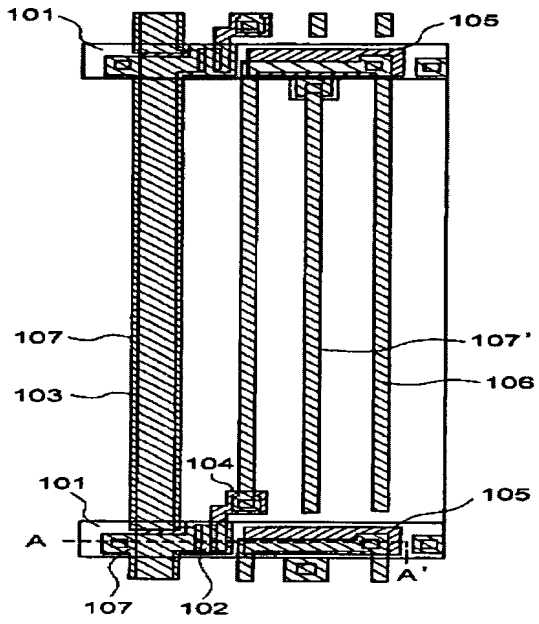
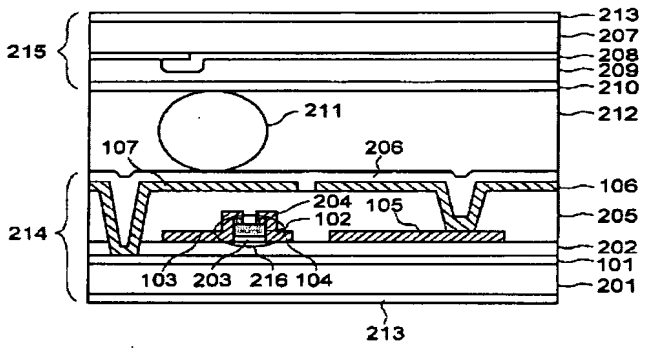


FIG. 2



Ando is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add to an in plane switched LCD a storage capacitor over the common line, wherein the storage capacitor contacts the second connecting line via a contact hole to comprise a display with improved aperture ratio.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of APA in view of Jeon and Wakagi with the storage capacitor over the common line, wherein the storage capacitor contacts the second connecting line via a contact hole of Ando to comprise a display with improved aperture ratio.

Additionally as to claims 4 and 5, as combined above, Jeon discloses a device further comprising: a first ITO layer (Figures 2A-2C and col. 2, lines 49-52) (Applicant's

auxiliary common line) on the first substrate (col. 2, lines 49-67, especially lines 55-58), the auxiliary common line being connected with the common electrode, 31, on the same layer as the gate electrode (formed during same process steps, col. 2, lines 55-58). The first ITO layer of Jeon exists everywhere under the first metal layer of Jeon, forming Applicant's auxiliary lines, it is the same ITO layer that forms the common electrode, and the portion of the ITO layer that is under the common line is connected to the portion of the ITO layer that serves as the common electrode.

Jeon is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to modify the LCD design to permit manufacture by the method of Jeon to simplify the process by reducing the mask number.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA with the specific layered structure of Jeon to permit manufacture by the simplified process of Jeon to reducing the mask number.

Additionally as to claim 17, as combined above, Jeon discloses in Figures 2A-2E, in-plane switching Liquid Crystal Display (LCD) device, comprising: a first substrate and a second substrate a gate line, 32a, on the first substrate; a metal common line, 32b, (Cr for both gate line and common line; col. 2, lines 49-58) on the first substrate, the common line parallel (as illustrated) to the gate line, a data line, 35, on the first substrate, the data line being perpendicular (as illustrated) to the gate line; a common electrode, 31, on the first substrate; a thin film transistor having a gate electrode, a

source electrode, 35a, and a drain electrode, 35b, formed on the first substrate; liquid crystal interposed between the first and second substrates (inherent to comprising a LCD device); a pixel electrode, 37, contacting the source electrode (Applicant's drain electrode) of the thin film transistor; and wherein, the pixel and common electrodes are formed of a transparent conductive material (ITO; col. 3, lines 18-22, and col. 2, lines 64-67).

Jeon is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to modify the LCD design to permit manufacture by the method of Jeon to simplify the process by reducing the mask number.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA with the specific layered structure of Jeon to permit manufacture by the simplified process of Jeon to reducing the mask number.

Additionally as to claim 18, Jeon, as combined above, discloses the LCD device of claim 17, wherein a portion of the common line overlies a portion of the common electrode (Figures 2A-2E, especially Figure 2C, and col. 2, lines 49-67, especially lines 64-67).

Jeon is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to modify the LCD design to permit manufacture by the method of Jeon to simplify the process by reducing the mask number.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA with the specific layered structure of Jeon to permit manufacture by the simplified process of Jeon to reducing the mask number.

As to claim 33, Jeon, as combined above, discloses the LCD device of claim 17, wherein the transparent conductive material includes indium tin oxide (ITO; col. 3, lines 18-22, and col. 2, lines 64-67).

Jeon is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to modify the LCD design to permit manufacture by the method of Jeon to simplify the process by reducing the mask number.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA with the specific layered structure of Jeon to permit manufacture by the simplified process of Jeon to reducing the mask number.

3. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Jeon, Wakagi, and Ando, as applied to claims 4 and 12 above, in view of Yoshioka et al (Yoshioka) USPAT 6,323,918 B1.

As to claims 13-15, APA in view of Jeon, Wakagi, and Ando disclose the device above.

APA in view of Jeon, Wakagi, and Ando do not explicitly disclose a device further comprising a passivation layer over the gate-insulating layer, a common electrode on the passivation layer, a black matrix on the passivation layer covering the active layer, wherein the black matrix is made of the same material as the pixel electrodes.

Yoshioka teaches in figure 30 (col. 16, line 17 through col. 17, line 15) a device further comprising an insulating film, 105 (Applicant's gate-insulating layer), over the gate line, 114, an interlayer insulating film, 105 and 109, (Applicant's passivation layer) over the gate-insulating layer, a pixel electrode, 110, on the passivation layer, a black matrix, 118, on the passivation layer covering the polysilicon active layer, 102, wherein the black matrix is made of Ti, Cr, or the like (Applicant's the same material as the pixel electrodes) (col. 9, lines 28-37) to form a capacitor comprising the black matrix (Abstract).

Yoshioka is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add a passivation layer over the gate-insulating layer, a common electrode on the passivation layer, a black matrix on the passivation layer covering the active layer, wherein the black matrix is made of the same material as the pixel electrodes to form a capacitor comprising the black matrix to improve display performance.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of

Jeon, Wakagi, and Ando with the passivation layer over the gate-insulating layer, a common electrode on the passivation layer, a black matrix on the passivation layer covering the active layer, wherein the black matrix is made of the same material as the pixel electrodes of Yoshioka to form a capacitor comprising the black matrix to improve display performance.

4. Claims 3, 6, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Jeon, Wakagi, and Ando, as applied to claims 4 and 17 above, in view of Colgan et al (Colgan) USPAT 6,278,502 B1.

As to claims 3, 6, and 34, APA in view of Jeon, Wakagi, and Ando discloses the device of claims 4 and 17.

APA in view of Jeon, Wakagi, and Ando dose not explicitly disclose a device wherein the transparent conductive material includes indium zinc oxide (IZO).

Colgan teaches the use of IZO and ITO (col. 2, lines 58-67, col. 3, lines 1-4, col. 3, lines 21-22, and col. 6, lines 6-8) as preferred materials for the formation of transparent conductive layers.

Colgan is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to use IZO as a preferred material for the formation of transparent conductive layers.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Jeon, Wakagi, and Ando with the IZO of Colgan.

5. Claims 8, 9, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Jeon, Wakagi, and Ando, as applied to claims 1 and 17 above, in view of Son et al (Son) USPAT US 2002/0008824 A1.

As to claim 8, APA in view of Jeon, Wakagi, and Ando discloses the device of claim 4.

APA in view of Jeon, Wakagi, and Ando, does not explicitly disclose a device, further comprising a first alignment layer on the first substrate.

Son teaches the use of a first alignment layer on the first substrate to align the liquid crystal molecules (para 0019).

Son is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to use a first alignment layer on the first substrate to align the liquid crystal molecules

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Jeon, Wakagi, and Ando with the alignment layer of Son.

As to claim 9, the device of claim 8 is taught above.

APA in view of Jeon, Wakagi, and Ando does not explicitly disclose a device, wherein the first alignment layer is selected from a group consisting of polyimide and photo-alignment material.

Son teaches a first alignment layer selected from a group consisting of polyimide and photo-alignment material (para 0030).

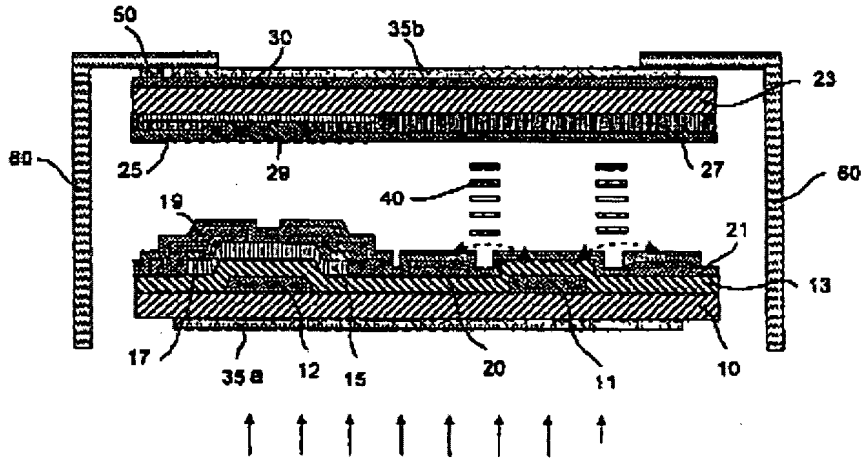
Son is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to use a first alignment layer selected from a group consisting of polyimide and photo-alignment material to align the liquid crystal molecules

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Jeon, Wakagi, and Ando with the alignment layer of polyimide or photo-alignment material of Son.

As to claim 32, APA in view of Jeon, Wakagi, and Ando discloses the LCD device of claim 17.

APA in view of Jeon, Wakagi, and Ando does not explicitly disclose a device, further comprising a black matrix on the second substrate.

FIG. 3



Son teaches in Figure 3, an LCD device, further comprising a light-shielding layer, 25, (Applicant's black matrix) on the second substrate, 23, (para 0029).

Son is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to use a black matrix on the second substrate to prevent light from leaking around the TFT (first two lines of para 0029).

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Jeon, Wakagi, and Ando with the black matrix on the second substrate of Son.

6. Claims 23-25, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Jeon, Wakagi, and Ando, as applied to claims 1 and 17 above, in view of Ishikura et al (Ishikura) USPAT 6,219,125 B1.

As to claims 23, and 24-25, APA in view of Jeon, Wakagi, and Ando discloses the LCD device of claim 17 further comprising an auxiliary common electrode under the common line, wherein the common electrode is electrically connected to the auxiliary common electrode.

APA in view of Jeon, Wakagi, and Ando does not explicitly disclose a device further comprising an auxiliary common electrode covering the common line.

Ishikura teaches in Figure 1 (col. 3, lines 34-54) a device wherein a portion of the ITO transparent electrode, 5, (Applicant's common electrode) overlies a portion of the principle electrocunductive layer, 12, (Applicant's common line), to improve conductivity and reduce resulting voltage waveform deformation (or distortion) (col. 1, lines 14-39).

Ishikura is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add a metal layer under the transparent electrode layer to improve conductivity and reduce resulting voltage waveform deformation (or distortion).

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Jeon, Wakagi, and Ando with the transparent electrode over the metal conductive layer of Ishikura, resulting in an auxiliary common electrode covering the common line,

wherein the common electrode is electrically connected to the auxiliary common electrode and is formed of the same transparent material, ITO.

As to claim 27, APA in view of Jeon, Wakagi, and Ando discloses the LCD device wherein a common pad at an end of the common line is well known in the art of liquid crystals and would obviously be beneficial to allow easy electrical connection of the driving circuit to the common line.

As to claim 28, 29, and 30, APA in view of Jeon, Wakagi, and Ando discloses the LCD device of claim 17, further comprising an auxiliary gate line of ITO and a (an auxiliary) gate pad under the gate line and the gate pad (, respectfully).

APA in view of Jeon, Wakagi, and Ando does not explicitly disclose a device further comprising an auxiliary gate line of ITO and a (an auxiliary) gate pad *under* the gate line and the gate pad (, respectfully).

Ishikura teaches in Figure 1 (col. 3, lines 34-54) a device wherein a portion of the ITO transparent electrode, 5, (Applicant's auxiliary gate line and auxiliary gate pad) overlies a portion of the principle electrocunductive layer, 12, (Applicant's gate line and gate pad), to improve conductivity and reduce resulting voltage waveform deformation (or distortion) (col. 1, lines 14-39).

Ishikura is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add a metal layer under the transparent

electrode layer to improve conductivity and reduce resulting voltage waveform deformation (or distortion).

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Jeon, Wakagi, and Ando with the transparent electrode over the metal conductive layer of Ishikura, resulting in an auxiliary gate line of ITO (same as common electrode ITO) and a (an auxiliary) gate pad *under* the gate line and the gate pad (respectfully).

7. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Jeon, Wakagi, Ando, and Ishikura, as applied to claim 23 above, and further in view of Colgan.

As to claim 26, APA in view of Jeon, Wakagi, Ando, and Ishikura discloses the device of claim 23.

APA in view of Jeon, Wakagi, Ando, and Ishikura dose not explicitly disclose a device wherein the transparent conductive material includes indium zinc oxide (IZO).

Colgan teaches the use of IZO and ITO (col. 2, lines 58-67, col. 3, lines 1-4, col. 3, lines 21-22, and col. 6, lines 6-8) as preferred materials for the formation of transparent conductive layers.

Colgan is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to use IZO as a preferred material for the formation of transparent conductive layers.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Jeon, Wakagi, Ando, and Ishikura with the IZO of Colgan.

8. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Jeon, Wakagi, Ando, and Ishikura, as applied to claim 28 above, and further in view of Colgan.

As to claim 31, APA in view of Jeon, Wakagi, Ando and Ishikura discloses the device of claim 28.

APA in view of Jeon, Wakagi, Ando, and Ishikura dose not explicitly disclose a device wherein the transparent conductive material includes indium zinc oxide (IZO).

Colgan teaches the use of IZO as a substitute material for ITO (col. 2, lines 58-67).

Colgan is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to use IZO as a substitute material for ITO.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Jeon, Wakagi, Ando, and Ishikura with the IZO of Colgan.

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Jeon, Wakagi, Ando, and Yoshioka, as applied to claims above, and further in view of Nakashima, USPAT 6,049,365.

As to claim 16, APA in view of Jeon, Wakagi, Ando, and Yoshioka disclose the LCD device of claim 15.

APA in view of Jeon, Wakagi, Ando, and Yoshioka does not explicitly disclose a black matrix formed of the same opaque metal, Cr, as the pixel electrode.

Nakashima discloses the use of Cr along with numerous other opaque conductive metals (col. 10, lines 25-34) that are well known in the art of liquid crystals for forming layers that will block light, and Nakashima teaches the formation of color filters and a black matrix (col. 10, lines 46-48) as well known in the art. Motivational advantages for the use of Cr are numerous including good electrical conductivity, good corrosion resistance, and good light blocking ability. Motivational advantages for the use of a black matrix are numerous and include improved contrast and elimination of light leaks. Motivational advantages for making the black matrix out of the same material as the pixel electrode include reduced process steps, ease of manufacture by reducing source metal changes, and mutual compatibility with other materials.

Nakashima is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to form the black matrix and pixel electrode of Cr to achieve high contrast, eliminate light leaks, reduce process steps, and improve product corrosion resistance.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of APA in view of Jeon, Wakagi, Ando, and Yoshioka with a black matrix and pixel electrode formed of the Cr of Nakashima to achieve high contrast, eliminate light leaks, reduce process steps, and improve product corrosion resistance.

(10) Response to Argument

Argument: In contrast to the claimed invention, Applicant's admitted prior art (APA) Figure 8 shows the common line and the common electrodes are formed at the same time from the same material and as a single structural unit.

Response: It is respectfully pointed out that Appellant's limitation "wherein the common electrodes are arranged to directly contact the common line" does not preclude that the common line and the common electrodes are formed at the same time from the same material and as a single structural unit. Also, in the rejection of claim limitations as to common electrodes made of a transparent conductive second material different from the first material, secondary reference Jeon, with proper motivation, is applied to modify the device of APA, resulting in Appellant's transparent conductive second material (ITO) different from the first material. APA teaches multiple parallel common electrodes while Jeon provides strong motivation to use a dual-layer (metal on ITO) method of making common lines and common electrodes to result in transparent

common electrodes and dual-layer metal on ITO common lines while minimizing method of making steps.

Argument: Examiner does not suggest that any of Jeon, Wakagi, or Ando disclose or suggest the above features.

Response: It is respectfully pointed out that in the rejection of claim limitations as to common electrodes made of a transparent conductive second material different from the first material, secondary reference Jeon, with proper motivation, is applied to modify the device of APA, resulting in Appellant's transparent conductive second material (ITO) different from the first material. Jeon teaches the use of metal over ITO to allow the formation of ITO electrodes and a dual-layer metal & ITO common line; this allows for good electrical conductivity with the metal layer of the common line as well as transparent common electrodes for good display brightness and contrast while using a simplified method of making that minimizes photolithography steps. Examiner considers Jeon to be a very good teaching as to the advantages of transparent common electrodes in direct contact with a metal common line while providing teaching on how economically make the structure with minimal method steps. Please note, this teaching is very clear and very broad; it is obviously very applicable to any number or shape of electrodes, be they pixel electrodes, common electrodes, parallel electrodes, etc. One of ordinary skill in the art would surely know the motivation from the teaching of Jeon

that one can improve display brightness of APA with the dual-layer ITO and metal design while minimizing method of making steps.

Argument: Figure 11 makes it clear that the invention has a common line that overlaps the common electrodes that are separate and distinct structures.

Response: It is respectfully pointed out that APA as modified per the motivations and teachings of Jeon result in Appellant's common line that overlaps the common electrodes that are separate and distinct structures. In fact, the common line of Jeon is a metal line that overlaps ITO everywhere. ITO common electrodes emerge from under the metal common line of Jeon. Leaving ITO everywhere under the metal common line is the structure that results from the method of making step saving technique of Jeon. This is clearly an advantage of Jeon, and that structure of Jeon reads on the present broad claim limitations. This teaching of Jeon is very clear and very broad; it is obviously very applicable to any number or shape of electrodes, be they pixel electrodes, common electrodes, parallel electrodes, etc.

Argument: Dependent claims are allowable because the independent claims are allowable.

Response: It is respectfully pointed out that examiner has considered all of Appellant's arguments and maintains all rejections are fully proper. The applied prior art

provides ample motivation and renders the claimed invention obvious to one of ordinary skill in the art at the time the claimed invention was made.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Timothy L. Rude

T. L. Rude 9/25/07

Conferees:

Ricky L. Mack RM

David C. Nelms